

## **Vermont Mental Health Performance Indicator Project**

DDMHS, Weeks Building, 103 South Main Street, Waterbury, VT 05671-1601 (802-241-2638)

### **MEMORANDUM**

TO: Vermont Mental Health Performance Indicator Project  
Advisory Group and Interested Parties

FROM: John Pandiani  
Monica Simon

DATE: January 18, 2002

RE: Elevated Risk of Trouble with the Law for Students with Low Test Scores

On September 7, 2001, we distributed the results of the first analysis of school test scores. That analysis examined the relationship between school performance and trouble with the law ([www.state.vt.us/dmh/Data/PIPs/2001/pip090701.pdf](http://www.state.vt.us/dmh/Data/PIPs/2001/pip090701.pdf)), focusing on the rate at which young people were charged with a crime during the year of the test, and the subsequent year. The analysis reported here complements that earlier analysis by adding an additional year to the follow-up period, and adding an examination of elevated risk associated with poor school performance. Because this project relies exclusively on existing administrative databases that continue to grow as time passes, replication studies, extension of the analytical frame, and long-term follow-up become natural parts of the process.

As in the earlier analysis, our subjects are young people who were 16 years of age during 1998 and 1999. The standardized test is the "skills" area of the Mathematics Assessment of Vermont's statewide New Standards Reference Exam. Our measure of criminal justice involvement is being charged with a crime in a Vermont District Court. In this analysis, criminal justice involvement is measured for one, two, and three year time periods. The single year is the year in which the test was taken. The two-year period includes this year and the subsequent year. The three-year period includes the test year and the two subsequent years. Rates of criminal justice involvement during all three time periods are reported for two groups of young people: those who scored at or above standard, and those who scored below standard. In addition, the elevated risk of getting in to trouble with the law that is associated with low test performance will be reported for each of the three time periods. Because the school test database and the criminal justice database do not include unique person identifiers, Probabilistic Population Estimation is used to determine the overlap between the educational and criminal justice data sets in this analysis.

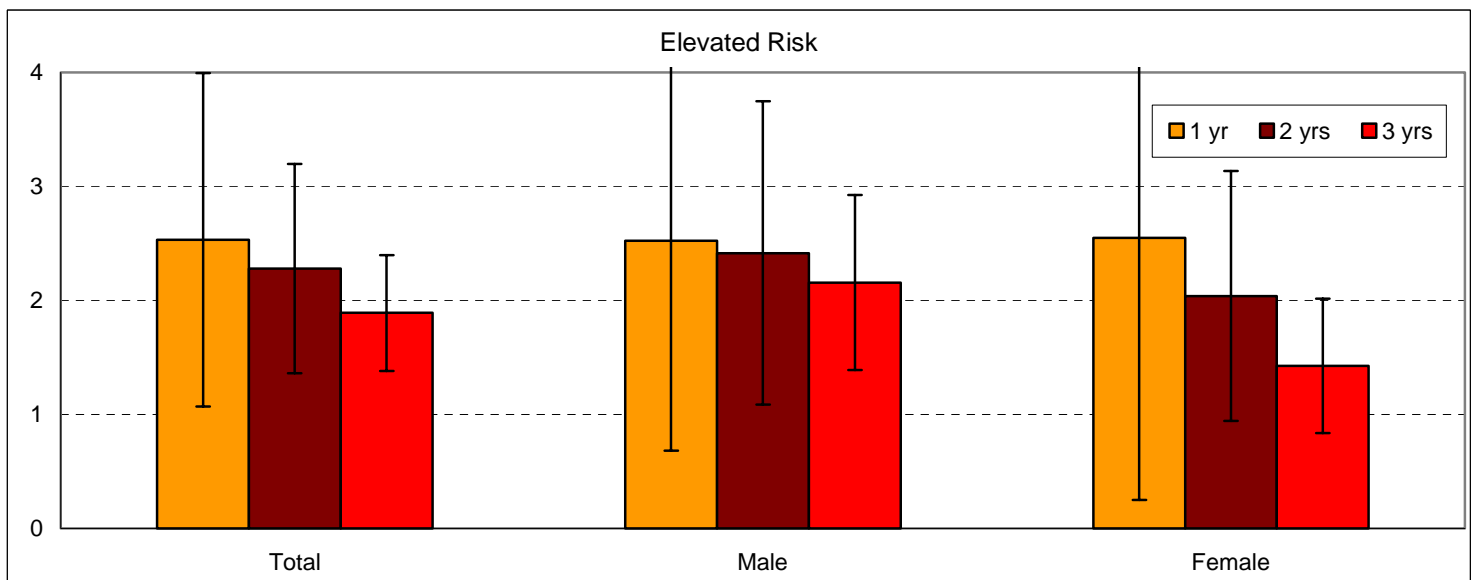
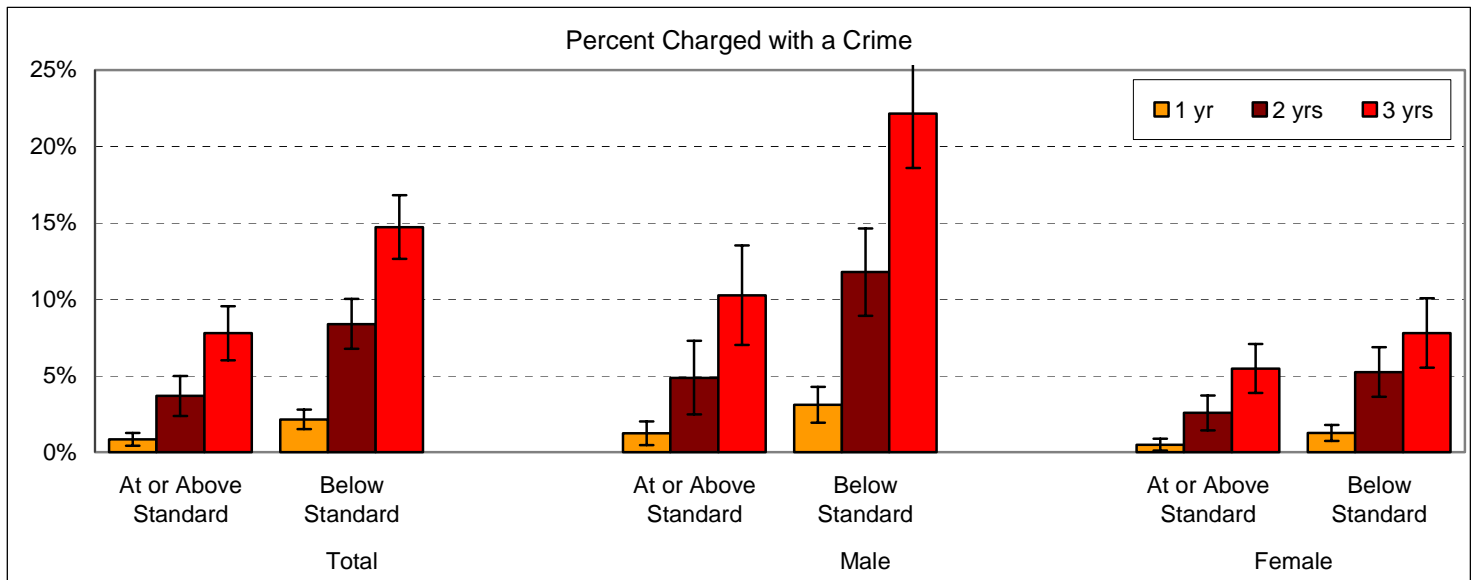
As you will see, the rate at which students in both groups got into trouble with the law increased substantially over time. By the end of this three-year period, 15% of all low scoring students (22% of boys and 8% of girls) had been charged with a crime. The rate at which these students got into trouble with the law, however, was significantly higher than the rate at which high

scoring students got into trouble with the law in all three time periods. This was true for both male and female students.

It is interesting to note that the elevated risk of getting into trouble with the law for students with low test scores (as compared to students with high test scores) decreased over time. It is also interesting to note that this decrease is much more substantial for young women than for young men. A similar pattern of decreasing elevated risk was evident in one of our earlier examinations of children's treatment outcomes, "After children's services: A longitudinal study of significant life events." (Pandiani, Schacht, & Banks, Journal of Emotional and Behavioral Disorders. Summer 2001, 131-138). Using incarceration as the measure criminal justice involvement, young men served by mental health, child protection, and/or special education programs were found to be 9.3 times as likely as other young men to get into trouble with the law during the first year after the treatment year. At the end of three years, this elevated risk had decreased to 4.9.

We will be very interested in your interpretation of this pattern of decreasing elevated risk, as well as your suggestions for further analysis of these data. As always, you can reach us at [jpandiani@ddmhs.state.vt.us](mailto:jpandiani@ddmhs.state.vt.us) or call 802-241-2638.

# **Young People in Trouble with the Law By Level of Standardized Test Performance 10th Graders Tested on Grade Level : 1998 - 1999**



Test Performance	Total		
	Within 1 Year	Within 2 Years	Within 3 Years
Below Standard	2.1% ± 0.6%	8.4% ± 1.6%	14.7% ± 2.1%
At or Above Standard	0.8% ± 0.4%	3.7% ± 1.3%	7.8% ± 1.8%
Elevated Risk	2.5 ± 1.5	2.3 ± 0.9	1.9 ± 0.5

Test Performance	Male			Female		
	Within 1 Year	Within 2 Years	Within 3 Years	Within 1 Year	Within 2 Years	Within 3 Years
Below Standard	3.1% ± 1.2%	11.8% ± 2.9%	22.2% ± 3.6%	1.3% ± 0.5%	5.2% ± 1.6%	7.8% ± 2.3%
At or Above Standard	1.2% ± 0.8%	4.9% ± 2.4%	10.3% ± 3.3%	0.5% ± 0.4%	2.6% ± 1.1%	5.5% ± 1.6%
Elevated Risk	2.5 ± 1.8	2.4 ± 1.3	2.2 ± 0.8	2.6 ± 2.3	2.0 ± 1.1	1.4 ± 0.6

On grade level for 10th grade includes young people whose 16th birthday fell between July of the summer before the academic year and September of the following year. All test scores are for the "skills" area of the Mathematics Assessment completed in March/April of each academic year. Charged with a crime is measured on the basis of the fiscal year. Analysis is based on data provided by The Center for Justice Research and The Vermont Department of Education. Because these data sets do not share unique person identifiers, Probabilistic Population Estimation was used to provide unduplicated counts of individuals shared across data sets (with 95% confidence intervals).